Initiation Report

ALTAMIRA THERAPEUTICS LTD.

15 April 2024
Company Sponsored Research
Initiating Coverage | Sector: Healthcare

Altamira Therapeutics Ltd. – Late-Stage Legacy Programs Provide Near-Term Catalysts with Promising RNA Delivery Platforms Offering Substantial Upside through a "Picks and Shovels" Business Model

Altamira Therapeutics Ltd. (NASDAQ: CYTO)

Share Price: $1.83

Valuation: $8.21

Key Statistics

52 Week Range	$1.61 - $29.00
Avg. Volume (3 months)	1.19M
Shares Outstanding	2.24M
Market Capitalization	$4.12M
EV/Revenue	N/A
Cash Balance*	CHF 2.37M
Analyst Coverage	1

***Estimated Cash Balance (inclusive of recent capital raise)**

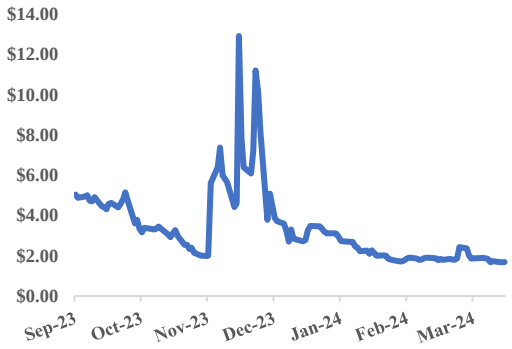
Revenue (in CHF millions)

Dec - FY	2023A	2024E	2025E
H1	0.00	0.00	0.00
H2	0.00	0.00	0.00
FY	0.00	0.00	0.00

EPS (in CHF)

Dec – FY	2023A	2024E	2025E
H1	N/A	(2.14)	(1.52)
H2	N/A	(1.75)	(1.24)
FY	(7.88)	(3.89)	(2.76)

Stock Price Chart (in $)



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Investment Highlights

- **Altamira's Delivery Platforms to Potentially Catalyze RNA Therapy Innovation:** Altamira Therapeutics is developing OligoPhore and SemaPhore, two peptide-based platforms for extra-hepatic delivery of RNA-based therapies. These systems utilize a proprietary 21 amino acid peptide to create nanoparticles, facilitating the delivery of siRNA (OligoPhore™) and mRNA (SemaPhore™) into cells. Notably, these platforms allow for the potential administration of nucleic acid payloads to non-hepatic tissues, setting them apart from typical RNA delivery technologies focused on liver targets. OligoPhore and SemaPhore have shown to be effective in mouse models of cancer and inflammatory disease, including osteoarthritis, atherosclerosis, and more. Beyond their clinical promise, these platforms represent a noteworthy opportunity for deal-making in the biotech industry. Their wide-ranging applicability and novel approach provide valuable prospects for strategic collaborations and partnerships, enriching the ecosystem for RNA-based therapy development. This potentially situates Altamira as a key innovator in therapeutic applications and a desirable partner for ventures aiming to explore the broad potential of RNA therapy.

- **Showcasing Innovative RNA Delivery Platform Through Flagship Therapeutic Programs:** Altamira Therapeutics is enhancing the RNA therapy landscape with its innovative RNA delivery platform, highlighted by two key programs: AM-401 for KRAS-driven cancers and AM-411 for Rheumatoid Arthritis (RA). These programs are pivotal in demonstrating the platform's ability to deliver targeted therapies effectively, establishing them as foundational projects rather than the sole focus. By inhibiting cancer gene activity and targeting inflammation pathways, respectively, they illustrate the platform's flexibility and broad potential applications. As Altamira advances these programs towards preclinical development, with plans for IND applications by 2025, the company is also exploring out-licensing opportunities. This strategy leverages the platform's utility across diverse therapeutic areas. Adopting a "picks and shovels" business model, which focuses on providing companies that have their own RNA-based therapeutics a delivery platform to reach the desired target tissue, Altamira is positioned within the rapidly expanding RNA therapeutic market. Amidst this growth, an active Mergers & Acquisitions (M&A) environment further highlights the strategic value and attractiveness of innovative RNA delivery technologies.

- **Strategic and Non-Dilutive Legacy Asset Monetization to Fuel High-Value RNA Focus:** The company is realigning its strategic direction towards RNA delivery technologies while managing its legacy business with an eye on optimizing resources. The company is exploring opportunities to divest or partner its late-stage assets, including Bentrio® (AM-301), AM-125, and Sonsuvi® (AM-111), across rhinology, neurotology, and allergology. This move aims to secure non-dilutive funding, reinforcing Altamira's commitment to its core focus on RNA therapeutic development. A key step in this direction was the divestiture of a 51% stake in Altamira Medica AG, responsible for Bentrio®, to a Swiss private equity investor. This transaction not only provided Altamira with CHF 2,040,000 (about $2.3 million) in cash but also maintained 49% ownership in the subsidiary. Importantly, Altamira secured rights to 25% of future licensing income from Medica. This arrangement grants Altamira approximately 62% of the upside potential from Bentrio's business, illustrating a calculated approach to leveraging its legacy assets to fuel its pivot towards RNA-based therapies.

Valuation: *Altamira Therapeutics presents a unique investment opportunity, blending the imminent monetization potential of its late-stage assets with the expansive growth possibilities in the RNA therapeutics field.* The company's focused effort to divest or partner its mature assets in key therapeutic areas aims for non-dilutive funding via upfront payments and milestones, thus potentially minimizing shareholder dilution—an uncommon aspect within biotechnology landscape. Despite significant development investments, Altamira's market capitalization appears to place limited value on its portfolio and pioneering RNA delivery technologies, OligoPhore™ and SemaPhore™, possibly due to market oversight of its strategic market position and its portfolio's upside optionality. A blended Discounted Cash Flow (DCF) analysis and comparable company analysis approach, assuming a 10.0% discount rate, yielded a valuation of $8.21 per share, contingent on the successful execution by the company.

Company Description

Altamira Therapeutics focuses on creating RNA-based treatments for non-liver targets using its OligoPhore™ and SemaPhore™ delivery platforms. It has two main preclinical siRNA projects: AM-401 for KRAS-driven cancer and AM-411 for rheumatoid arthritis. The company is also divesting or out-licensing its legacy allergology, viral infection, and inner ear therapeutic assets.

Please see last page for important disclosures

Company Overview

Altamira Therapeutics is a preclinical-stage biopharmaceutical company developing and supplying peptide-based nanoparticle technologies for efficient RNA delivery to extrahepatic tissues. Operating at clinical stages, the company is advancing with a dual strategy. On the one hand, it is pioneering RNA delivery technologies for targeting diseases outside the liver. On the other hand, it is monetizing its legacy business, which includes nasal sprays for protection against airborne allergens and clinical-stage programs for the treatment of inner ear disorders such as vertigo, hearing loss, and tinnitus. Central to Altamira's research and development efforts are its proprietary OligoPhore™ and SemaPhore™ platforms. These groundbreaking technologies represent a major step forward in the delivery of nucleic acids, such as siRNA and mRNA, into cells, particularly in tissues outside the liver. This approach is crucial for the future of RNA-based therapeutics. Altamira is actively developing treatments for a range of conditions, with its flagship projects targeting KRAS-driven cancers and rheumatoid arthritis, both currently in the preclinical stage. In addition to its focus on RNA technologies, Altamira's legacy business includes Bentrio®, a nasal spray that offers over-the-counter protection against airborne particles such as allergens. The company's portfolio also features a suite of treatments for inner ear conditions, which includes leading clinical programs such as AM-125 for vertigo (Phase 2), and Sonsuvi® (AM-111) for acute inner ear hearing loss (Phase 3).

Altamira Therapeutics develops innovative treatments for unmet needs, focusing on RNA delivery technologies for targeting diseases outside the liver and therapies for allergen protection and inner ear disorders

Recognizing the significant potential of RNA-based therapies, Altamira is increasingly focusing its efforts on its RNA delivery technology. This strategic pivot involves evaluating options for divesting or partnering on its non-RNA related businesses, including its nasal spray and inner ear therapeutic programs. A notable step in this strategic direction was the partial spin-off of the Bentrio® business on November 21, 2023, where Altamira sold a 51% stake in its subsidiary, Altamira Medica AG. This transaction not only provided a cash infusion but also ensured rights to future licensing revenue. This sharpened focus on RNA technology underscores Altamira's commitment to leading the development of next-generation therapeutics. By concentrating its resources on this promising area, Altamira Therapeutics is positioning itself at the forefront of addressing the complex challenges of modern medicine, with the goal of improving health outcomes for patients worldwide.

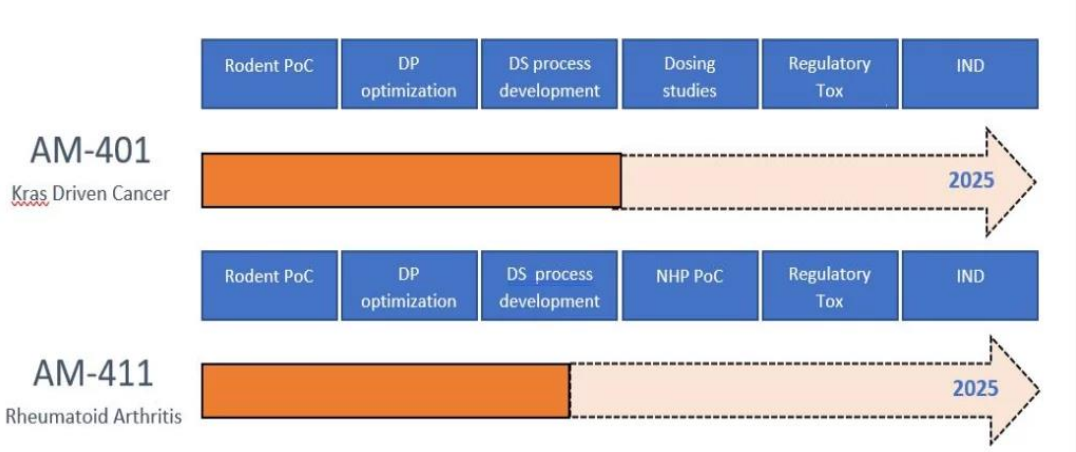

Exhibit 1: Altamira Therapeutics RNA Programs Development Status. Source: Company Website
Note: POC: Proof of Concept; IND: Investigational New Drug application; DS: Drug Substance; DP: Drug Product

Corporate Overview

Altamira Therapeutics Ltd., (formerly known as Auris Medical) established as an exempted company in Bermuda, commenced its operations in 2003. The company is based in Basel, Switzerland, and originally concentrated on developing therapeutics for the inner ear, specifically targeting tinnitus and hearing loss. Auris Medical made its debut on the Nasdaq in 2014, trading under the ticker symbol "EARS." In 2021, the company broadened its scope by acquiring Trasir Therapeutics, Inc., a Washington University St. Louis spin-off that had pioneered a peptide-based RNA delivery technology. This acquisition marked a strategic pivot towards RNA delivery, recognizing the significant opportunities in the burgeoning RNA sector. Consequently, it shifted its focus from its legacy inner ear therapeutics and allergy nasal spray ventures, seeking to monetize these through partnerships or out-licensing. In line with this strategic realignment, it rebranded to Altamira Therapeutics Ltd. and transitioned to the ticker symbol "CYTO"

The Emerging Prospect of RNA-based Therapy

The rapidly growing field of RNA-based therapies represents a significant shift in the biopharmaceutical landscape, opening up new avenues of precision medicine with the potential to address unmet medical needs across a spectrum of disease areas. At its core, RNA-based therapies involve the use of ribonucleic acid (RNA) molecules to either upregulate or downregulate the expression of specific genes associated with disease states. This approach offers a highly targeted method for treating a range of conditions, from genetic disorders to various forms of cancer and even infectious diseases, thereby opening up a vast market opportunity for biotech and pharmaceutical companies.

RNA-based therapies manipulate RNA molecules to adjust the expression of disease-related genes, providing targeted treatment for genetic disorders, cancers, and infectious diseases, presenting significant market potential for biotechnology and pharmaceutical companies

Since its discovery in 1961 by Brenner and colleagues, RNA has been at the forefront of biological research, undergoing various phases of exploration that highlight its complexity and vital role in life. Initially, researchers concentrated on understanding RNA's structure and its relationship to DNA, laying the groundwork for subsequent discoveries. Attention then shifted to its crucial role in protein synthesis and deciphering genetic information. More recent investigations have uncovered RNA's diversity and its significant functions beyond protein production, including gene expression regulation, RNA molecule modification, and catalytic activities.

This expanding understanding of RNA's role has paved the way for innovative RNA-based therapies. Leveraging the unique functions of molecules like mRNA, siRNA, and ASOs, these therapies offer new strategies for treating a broad spectrum of diseases, from genetic disorders to cancers and infectious diseases. Unlike traditional drugs that act on proteins, RNA therapies can modulate gene expression or correct genetic mutations at the RNA level, allowing for the precise treatment of a wide range of genetic disorders, including those previously deemed untreatable. This technology enables the development of personalized medicine, potentially offering higher efficacy and fewer side effects compared to conventional treatments. Furthermore, RNA-based therapies, such as mRNA vaccines, can be rapidly designed and produced, offering a swift response to emerging health threats like pandemics. This progress opens up promising avenues for precision medicine and treatments for previously untreatable conditions, underscoring the transformative potential of RNA research in healthcare.

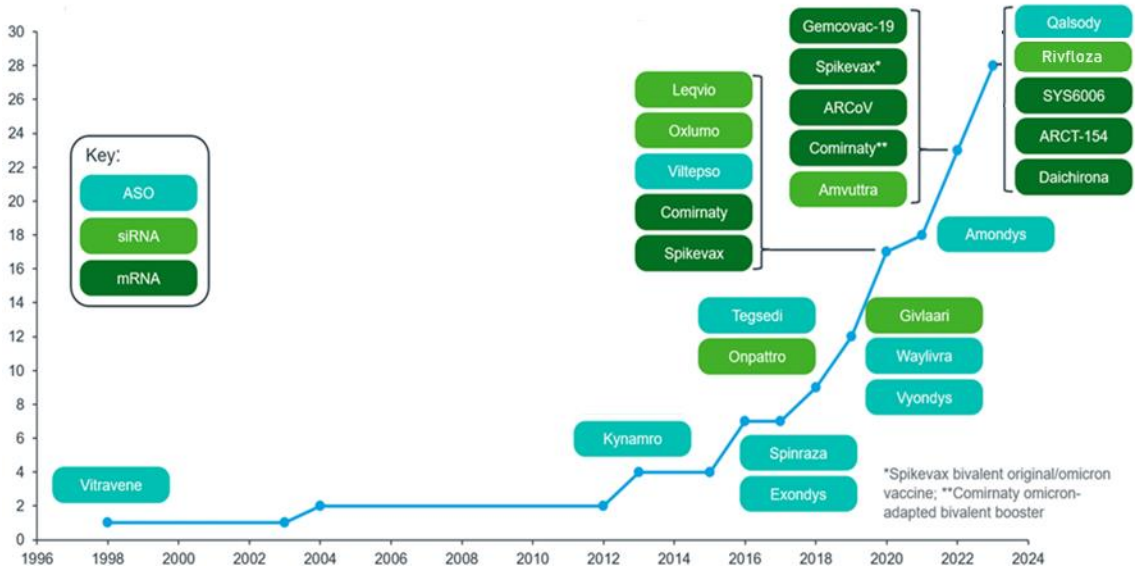

Exhibit 2: RNA Products Approved by Type. Source: IQVIA

RNA therapies utilize RNA molecules to address diseases through two primary strategies: firstly, by modulating levels of RNAs linked to diseases, and secondly, by introducing messenger RNA (mRNA) to enable the production of beneficial proteins. These approaches encompass manipulating disease-associated RNA levels and augmenting cellular function with therapeutic proteins.

Messenger RNA (mRNA) Therapies: mRNA therapies introduce synthetic mRNA into cells, which then use the mRNA as a template to produce specific proteins that are deficient or malfunctioning in the patient. By enabling the production of therapeutic proteins directly inside the body's cells, mRNA therapies can treat diseases by compensating for absent or defective proteins. This approach is widely recognized in the rapid development of COVID-19 vaccines, where the synthetic mRNA codes for the virus's spike protein, eliciting an immune response without using live virus particles.

Small Interfering RNA (siRNA) Therapies: siRNAs are short, double-stranded RNA molecules that specifically target and bind to complementary mRNA sequences in the cell. Once bound, they induce the degradation of the target mRNA, preventing the synthesis of disease-causing proteins.

Antisense Oligonucleotides (ASOs): Antisense Oligonucleotides (ASOs) are short, synthetic strands of DNA designed to bind to specific RNA sequences within our cells. This binding can change how genes are expressed, either by blocking the production of a harmful protein or by correcting the way a gene's message is read by the cell. ASOs are particularly useful in treating genetic diseases, as they can not only silence gene expression but also correct a gene mutation that produces a defective protein.

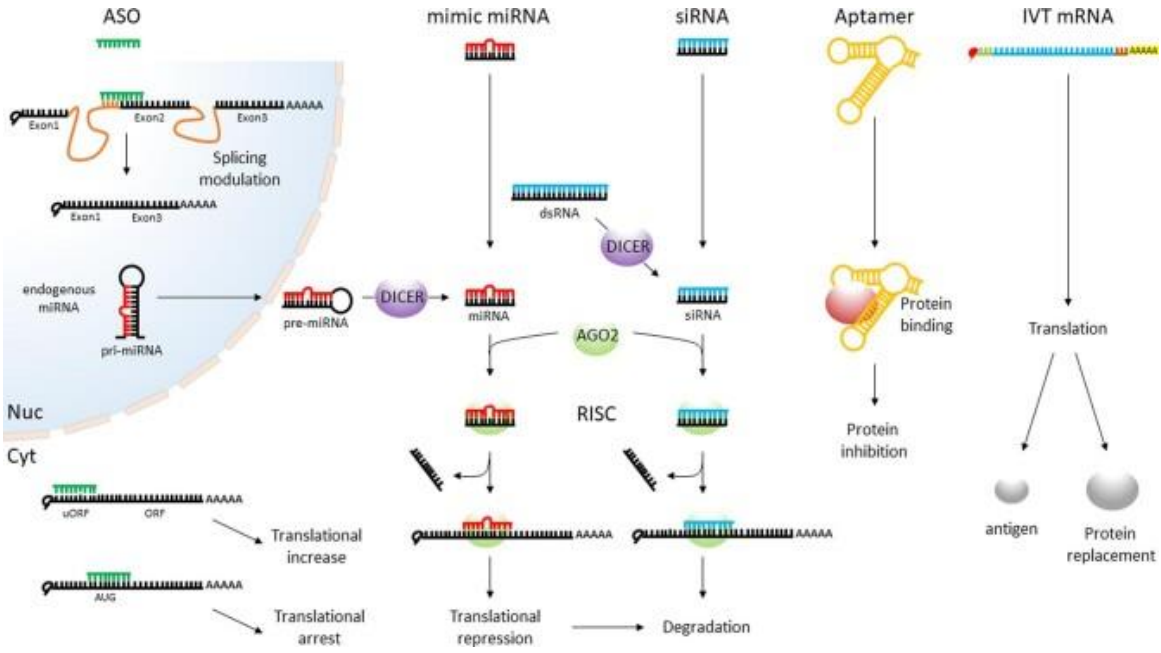

Exhibit 3: Mechanism of Action of Different RNA-based Therapeutics. Source: Lara et al., 2021

Despite the remarkable progress and potential of RNA-based therapies, a major challenge that limits its widespread application is the effective delivery of RNA molecules into target cells. Various delivery systems, such as viral vectors, lipid nanoparticles (LNPs), and ligand conjugates, each exhibit unique advantages but also face specific limitations. Viral vectors are highly efficient but raise concerns regarding ***immunogenicity*** and potential genomic integration. LNPs, while successful in RNA vaccine delivery, predominantly accumulate in the liver, limiting their application for diseases affecting other organs. Ligand conjugates, including those using GalNac technology, offer ***targeted delivery*** to the liver but struggle to reach non-liver tissues due to the lack of universally accessible receptors. Aside from immunogenicity and targeted delivery, the ***stability*** of RNA molecules and ***off-target effects*** also remain major concerns. RNA molecules are inherently unstable and prone to degradation by nucleases present in the bloodstream and within cells, necessitating sophisticated stabilization and encapsulation strategies to ensure that they reach their target cells intact. Furthermore, ensuring the specificity of RNA-based therapies is critical to minimize off-target effects, where the RNA interacts with unintended targets, potentially leading to adverse outcomes. Overcoming these hurdles requires innovative approaches to ensure stability, minimize immune detection, and achieve precise targeting across a broader range of cell types and tissues, which is crucial for expanding the therapeutic reach of RNA-based medicines.

Altamira's Innovative and Disruptive RNA-Therapy Delivery Technology Platform

In June 2021, Altamira Therapeutics announced the acquisition of Trasir Therapeutics, Inc., a Tampa, FL-based pioneer in extrahepatic oligonucleotide delivery. Building on this acquisition, the company is further advancing the field of RNA-based therapies with its innovative OligoPhore™ / SemaPhore™ delivery technology platform, aimed at addressing the critical challenge of effective nucleic acid delivery. This challenge, particularly the delivery into non-liver tissues, is a key hurdle in realizing the full therapeutic potential of RNA medicines. The platform is designed for systemic or local delivery of nucleic acid payloads, such as siRNA and mRNA, targeting a range of diseases. Despite the existence of various delivery carriers like viral vectors, lipid nanoparticles (LNPs), and ligand conjugates, targeting non-liver tissues remains a significant challenge. For instance, LNPs and ligand conjugates using GalNac technology are primarily liver-focused, limiting their application for diseases affecting other organs.

The company is enhancing RNA-based therapies with its OligoPhore™ / SemaPhore™ technology, targeting effective nucleic acid delivery, especially to non-liver tissues. This platform supports the administration of RNA medicines like siRNA and mRNA for various diseases

The OligoPhore™ / SemaPhore™ platform utilizes a proprietary 21 amino acid peptide to form a polyplex with nucleotide components, enabling delivery of oligonucleotides (OligoPhore™) and mRNA (SemaPhore™) into target cells. This polyplex is characterized by physical properties that evade hepatic clearance, allowing it to reach target tissues beyond the liver. It efficiently penetrates the leaky vasculature associated with various pathologies and is taken up by cells capable of macropinocytosis, such as cancer cells or macrophages, but also transfects other cell types like endothelium and smooth muscle.

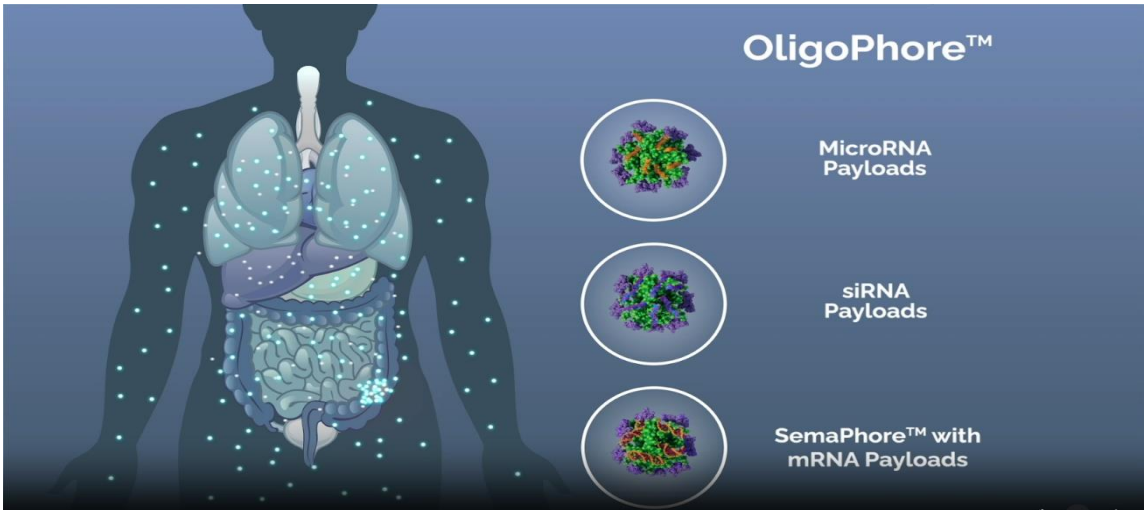

Exhibit 4: OligoPhore/SemaPhore Representation. Source: Company Presentation

RNA therapies must enter cells, typically through natural cellular entry mechanisms such as endocytosis, to exert their effects. However, these mechanisms often result in the degradation of RNA and proteins within late endosomes. Thus, it is critical for RNA therapies to escape the endosome and reach the cytoplasm before their contents are metabolized. Many RNA medicines suffer from poor exit from these endosomes leading to payload loss and reduction of the amount of RNA that effectively reaches the cytoplasm.

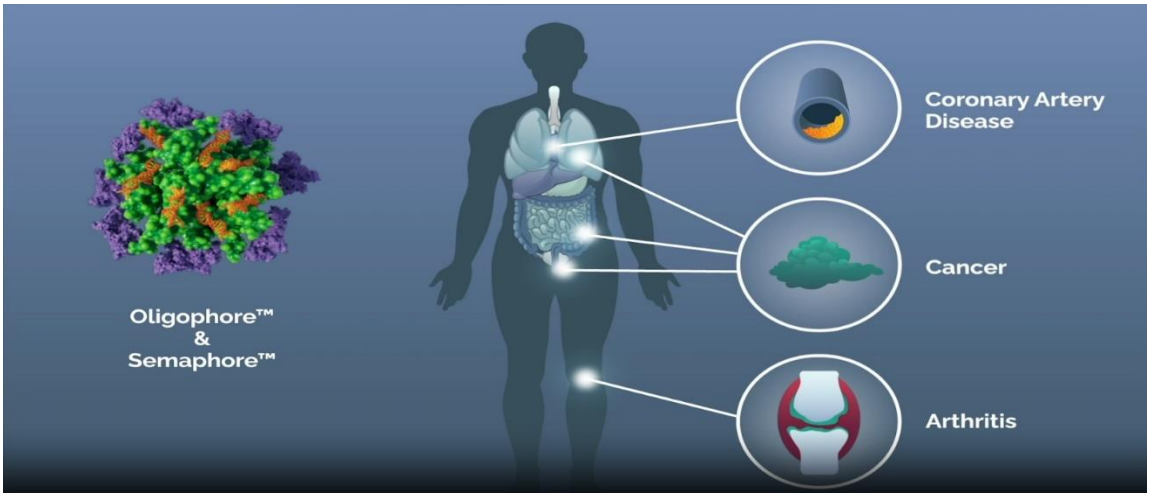

Exhibit 5: OligoPhore/SemaPhore Targets a Range of Diseases. Source: Company Presentation

Key benefits of the OligoPhore™ / SemaPhore™ platforms include:

- **Stability:** The technology encapsulates RNA within nanoparticles, which ensures that the therapeutics RNA is only released inside the cells after uptake. This improves the stability of RNA, preventing its degradation before reaching the target site.

- **Extrahepatic Delivery:** It is engineered to avoid getting trapped in the liver, a common issue with conventional RNA-based therapy delivery systems. This allows the nanoparticles to distribute throughout the body and permeate inflamed pathological tissue, facilitating passive targeting to areas that most require the therapy.

- **Endosomal Escape:** After cellular uptake, the technology boasts a high efficiency of endosomal escape within the target cells. This is critical for the RNA to exit the cell's endosomes and execute its therapeutic function. Compared to current technologies, which show 1-2% efficiency, OligoPhore/SemaPhore reports significantly higher levels of efficiency.

- **Selectivity:** It acts selectively on targets in diseased tissues, avoiding effects on healthy cells. This reduces potential side effects and increases the therapeutic index of the RNA drug.

- **Safety:** No immune system activation has been observed against the nanoparticle components or the RNA, even after multiple doses. Also, no organ toxicities were noted in preclinical mouse models, suggesting a high potential safety profile.

The OligoPhore™ / SemaPhore™ platforms enhance RNA therapy delivery with body-wide distribution, high cellular release efficiency, targeted action, and a strong safety profile, minimizing side effects and avoiding liver capture

Efficacy of OligoPhore™ and SemaPhore™ Across Disease Models

The OligoPhore™ and SemaPhore™ platforms from Altamira Therapeutics have been rigorously tested across a range of disease models, showcasing their versatility and potential efficacy in delivering RNA-based therapies. The OligoPhore™ platform, in particular, has shown effective delivery and positive treatment outcomes in over 12 diverse early-stage murine models. These

models span a broad spectrum of diseases, including cancer, cardiovascular conditions, and rheumatological disorders, targeting key proteins and pathways such as the NF-κB family, the ETS transcription factor family, and the JNK and TAM pathways. Similarly, the SemaPhore™ platform has exhibited promising results in five distinct murine disease models, specifically targeting osteoarthritis, atherosclerosis, and aortic aneurysm. The successful targeting of WNT 16, p27Kip1, and SOD2 showcases SemaPhore™'s capability to address diseases through the modulation of critical biological pathways. All of these results have been published in peer-reviewed journals.

The OligoPhore™ platform demonstrated effective treatment in over 15 disease models, including cancer and cardiovascular diseases, while the SemaPhore™ platform showed promising outcomes in models for osteoarthritis, atherosclerosis, and aortic aneurysm

Building on the demonstrated success of its OligoPhore™ delivery platform across diverse disease models, Altamira Therapeutics Ltd. announced a collaboration with Heqet Therapeutics s.r.l., utilizing its OligoPhore™ delivery platform. Heqet, a biotech company originating from King's College London and based in Turin, Italy, focuses on developing genetic medicines for ischemic heart disease recovery. This partnership will enable Heqet to use Altamira's OligoPhore™ platform to deliver specific non-coding RNAs (ncRNAs) aimed at regenerating heart tissue damaged by myocardial infarction in animal models. Non-coding RNAs are known for their regulatory roles in gene expression, offering a novel approach to treating heart disease. The agreement allows Heqet to conduct experiments with the goal of reversing ischemic heart damage using Altamira's technology. Should these initial tests prove successful, Heqet could negotiate a license to employ Altamira's technology and intellectual property in developing cardiac regeneration therapies. The collaboration between Altamira and Heqet represents a new application of Altamira's OligoPhore™ technology, extending its use to the area of cardiac health, specifically in the regeneration of heart tissue post-myocardial infarction (commonly called heart attack).

Altamira Therapeutics Ltd. further expanded its collaborative horizon by entering into a partnership with Univercells Group. This new collaboration is aimed at evaluating the efficacy of Altamira's proprietary SemaPhore platform for the delivery of mRNA vaccines, marking a significant venture into the field of immunization and preventive healthcare. Univercells is a global life sciences entity renowned for its innovative platforms for biologics development and manufacturing, including mRNA vaccines. The agreement involves Univercells conducting comprehensive in vitro and in vivo tests using a proprietary mRNA vaccine delivered through Altamira's SemaPhore nanoparticle platform. This exploration seeks to validate SemaPhore's potential to enhance the delivery efficiency of mRNA vaccines by minimizing mRNA loss during cellular entry and reducing the incidence of side effects, promising a more effective and tolerable vaccine delivery methodology. Success in these initial experiments could pave the way for a commercial agreement focused on the development and manufacturing of nanoparticle-based mRNA vaccines, leveraging Univercells' production capabilities.

Altamira Therapeutics is actively seeking further collaborations to enhance and expand the reach of its innovative RNA delivery technologies. These partnerships not only highlight the potential of Altamira's OligoPhore™ and SemaPhore™ delivery platforms in the fields of regenerative medicine and vaccine development but also set a precedent for future collaborations that could further expand the therapeutic applications of RNA-based technologies.

Showcasing Innovative RNA Delivery Platform Through Key Therapeutic Programs

Altamira Therapeutics is leveraging its innovative OligoPhore™ and SemaPhore™ platforms to revolutionize RNA delivery in therapeutic applications. The company's strategy emphasizes on potential expansion of these platforms' utility through strategic collaborations across various therapeutic areas. Central to showcasing the capabilities of these platforms, Altamira is initially concentrating on two key programs:

- AM-401, targeting the treatment of KRAS-driven cancers, and
- AM-411, targeting the treatment of rheumatoid arthritis.

Targeting KRAS-driven Cancer

In July 2021, Altamira Therapeutics unveiled its plan to tackle KRAS-driven cancers using its OligoPhore™ oligonucleotide delivery platform, marking a significant step in the fight against this challenging disease. The project, named AM-401, is designed to target and inhibit the proliferation of tumor cells driven by KRAS mutations through the delivery of siRNA directly into these cells, effectively suppressing the KRAS gene's activity. Also, AM-401, in contrast to other KRAS-targeting approved drugs, is able to address various cancer-causing mutations rather than just one known as G12C. The initiative sets a promising trajectory toward preclinical studies, with an aim to file for an Investigational New Drug (IND) application by 2025.

AM-401 aims to halt tumor cell growth caused by KRAS mutations by delivering siRNA directly into cells, effectively suppressing the KRAS gene's activity

The KRAS gene is instrumental in encoding the RAS protein, which acts as a critical "on/off switch" for cellular processes such as growth, maturation, migration, and apoptosis. Mutations in KRAS lead to the continuous activation of Ras proteins, fostering uncontrolled cancer cell growth and dissemination. KRAS mutations are notably linked to a poor prognosis in several cancers, with substantial evidence supporting their role in the onset and persistence of the disease. According to Herdeis et al. (2021) in Current Opinion in Structural Biology, mutated KRAS is present in a significant fraction of all human cancers, including 32% of non-small-cell lung cancers (NSCLCs), 40% of colorectal cancers (CRCs), and between 85-90% of pancreatic cancers. The American Cancer Society notes that almost 150,000 new cases of KRAS-mutated tumors are diagnosed annually in the United States across these cancer types, contributing to roughly one million deaths globally each year (Simanshu et al., 2017). Despite the known carcinogenic potential of KRAS mutations discovered in 1982, developing targeted therapies has been a formidable challenge. The inherent properties of KRAS, particularly its lack of clear binding sites, earned it the reputation of being "undruggable" for many years. It was not until the recent FDA approval of sotorasib, a small molecule targeting KRAS G12C mutations in NSCLC, that a breakthrough in KRAS-driven cancer treatment emerged. In early pre-clinical studies, Altamira's polyKRAS^{mut} siRNA has been demonstrated to suppress at least 65-91% of KRAS mutations in colorectal, non-small cell lung, and pancreatic cancer cell lines.

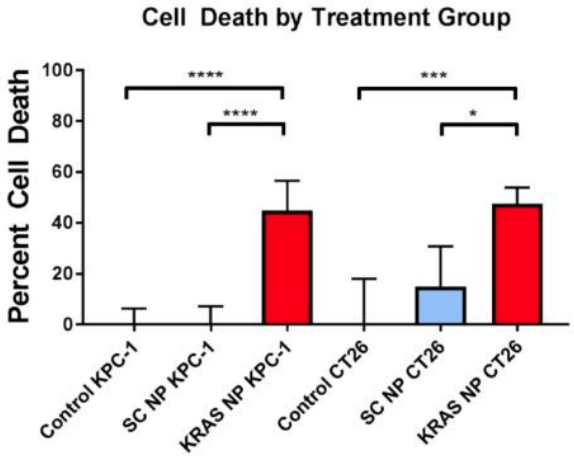

Exhibit 6: Treatment of Pancreatic and Colorectal Cells with KRAS-siRNA NP Leads to Apoptosis Mediated Cell Death in vitro. Source: Strand et al., 2019

Early studies of OligoPhore™ nanoparticles targeting KRAS with siRNA have shown efficient uptake by cancer cells, reduced KRAS expression, and decreased tumor growth in colorectal and pancreatic cancers

Altamira's approach with AM-401 combines this innovative targeting strategy with the potential of RNA therapeutics, which offer versatility and the possibility of reduced treatment resistance compared to traditional small molecule therapies. The project's vision includes the deployment of a polyvalent siRNA sequence, polyKRAS^{mut}, capable of targeting various KRAS mutations, highlighting the adaptability and potential of RNA-based interventions. This strategy also aims to overcome one of the greatest challenges in cancer therapy—the delivery of therapeutic agents directly to cancer cells. By integrating the polyKRAS siRNA with the OligoPhore™ technology, Altamira creates nanoparticles designed for precise delivery to the tumor site, thus maximizing the therapeutic potential of AM-401. Preliminary in vitro and in vivo studies have shown promising results, including efficient uptake of OligoPhore™ nanoparticles carrying KRAS-targeted siRNA by colorectal and pancreatic cancer cells, significant downregulation of KRAS expression, and reduced tumor cell viability and growth. These findings underscore the potential of the OligoPhore™ platform in achieving targeted delivery and therapeutic efficacy against KRAS-driven tumors.

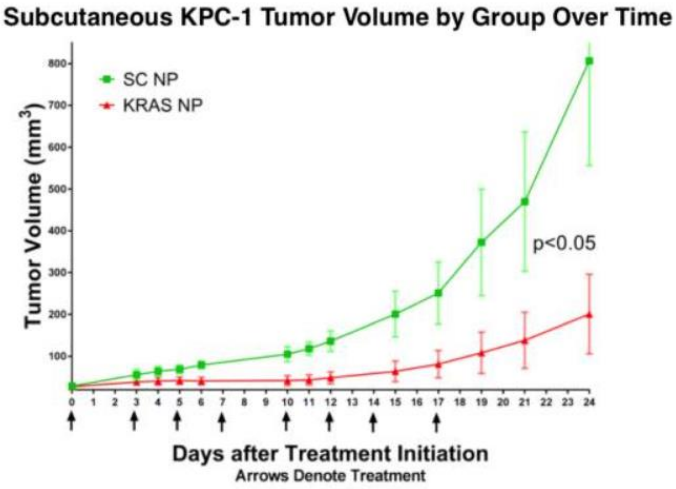

Exhibit 7: OligoPhore polyKRAS Significantly Reduces Pancreatic Tumor Volume Growth in vivo. Source: Strand et al., 2019

The company has filed a patent with the USPTO for its OligoPhore™ platform-based approach to treat KRAS-driven cancers, utilizing a single siRNA sequence for broad KRAS mutation coverage. With a patent protection for AM-401 extending to 2034 (with potential extension up to 2043), the company safeguards its innovative approach to cancer treatment. Altamira plans to engage in pre-IND discussions with the FDA and is preparing to launch a Phase 1 clinical trial for patients with KRAS-driven cancer in 2025, subject to regulatory approval. Showcasing its AM-401 program, the company is open to further partnerships for its RNA delivery platform and leveraging collaborative efforts to advance its innovative therapeutic approaches.

Targeting Rheumatoid Arthritis

In July 2022, Altamira Therapeutics unveiled its plans to develop a program for rheumatoid arthritis (RA) treatment, leveraging its proprietary OligoPhore™ delivery platform. This strategic initiative, known by AM-411, aims to employ siRNA targeting NF-κB, a critical inflammatory mediator in RA.

Rheumatoid Arthritis is a chronic, debilitating autoimmune condition characterized by inflammation of the joints, which can lead to severe pain, swelling, and eventual loss of joint function. It can also affect other organs, leading to a wide range of systemic symptoms. In the U.S. alone, Rheumatoid Arthritis affects approximately 1.3 million adults[1], while globally, the World Health Organization (WHO) estimates up to 18 million people[2] live with this condition. Rheumatoid Arthritis demonstrates a higher prevalence among women and can occur at any age, significantly impacting quality of life. The treatment landscape for Rheumatoid Arthritis has evolved over the years, yet remains focused on managing symptoms and slowing disease progression due to the lack of a cure. Current therapies include biologic and non-biologic immunosuppressants, corticosteroids, and non-steroidal anti-inflammatory drugs (NSAIDs). Despite their benefits, these treatments often lead to drug resistance in about half of the patients, and systemic adverse reactions are common. These can range from rash and hair loss to more severe effects like altered liver function, low blood cell counts, and increased risk of infections. Recent advances have introduced new biologics targeting specific pathways such as JAK/interleukins; however, the FDA has issued black box warnings for some due to safety concerns.

The anti-rheumatics market is set to grow to USD 79.6 billion by 2030, fueled by an aging population, rising disease prevalence, and advancements in diagnosis and awareness

The global market for anti-rheumatics is experiencing significant growth, projected to reach USD 79.6 billion[3] by 2030, from USD 61.7 billion in 2021. This expansion is driven by an aging global population, an increase in rheumatic disease prevalence, and improvements in screening, diagnosis, and patient awareness of treatment options.

Treatment typically begins with disease-modifying anti-rheumatic drugs (DMARDs), with methotrexate being the first-line option, often combined with another DMARD and a short course of steroids to alleviate pain. JAK inhibitors, such as Rinvoq, Olumiant, and Xeljanz, represent the newest class of drugs approved for Rheumatoid Arthritis, targeting the JAK-STAT signaling pathway to reduce inflammation. They are offered to people who cannot take DMARDs or

[1] Xu Y, Wu Q. Prevalence Trend and Disparities in Rheumatoid Arthritis among US Adults, 2005-2018. J Clin Med. 2021;10(15):3289. Published 2021 Jul 26
[2] Rheumatoid arthritis, World Health Organization. Available at: https://www.who.int/news-room/fact-sheets/detail/Rheumatoid-arthritis
[3] Anti-rheumatics market size, Growth Report, trends 2022-2030. Available at: https://www.amecoresearch.com/anti-rheumatics-market/toc/276808

biologicals, or tried them but found they were not effective. TNF inhibitors are among the most widely used and financially successful Rheumatoid Arthritis treatments, despite the increased infection risk associated with their use. These drugs, including etanercept (Enbrel®), infliximab (Remicade®), adalimumab (Humira®), certolizumab pegol (Cimzia®), and golimumab (Simponi®), vary in structure but share similar efficacy and safety profiles in reducing Rheumatoid Arthritis symptoms and halting radiographic damage.

Altamira's AM-411 offers a novel treatment for Rheumatoid Arthritis by delivering siRNA to inflamed joints, reducing systemic side effects and the risk of treatment resistance

Altamira's approach with AM-411 introduces a revolutionary concept by delivering siRNA specifically to inflamed joints, thereby targeting Rheumatoid Arthritis at its source while minimizing systemic side effects. This targeted treatment promises not only to provide potent therapeutic effects but also to reduce the risk of treatment resistance—a common drawback of current therapies. By focusing on a key inflammatory checkpoint, Altamira positions AM-411 as a potential game-changer in rheumatoid arthritis treatment, reflecting the company's efforts to leverage its RNA delivery technology to address unmet medical needs in rheumatology

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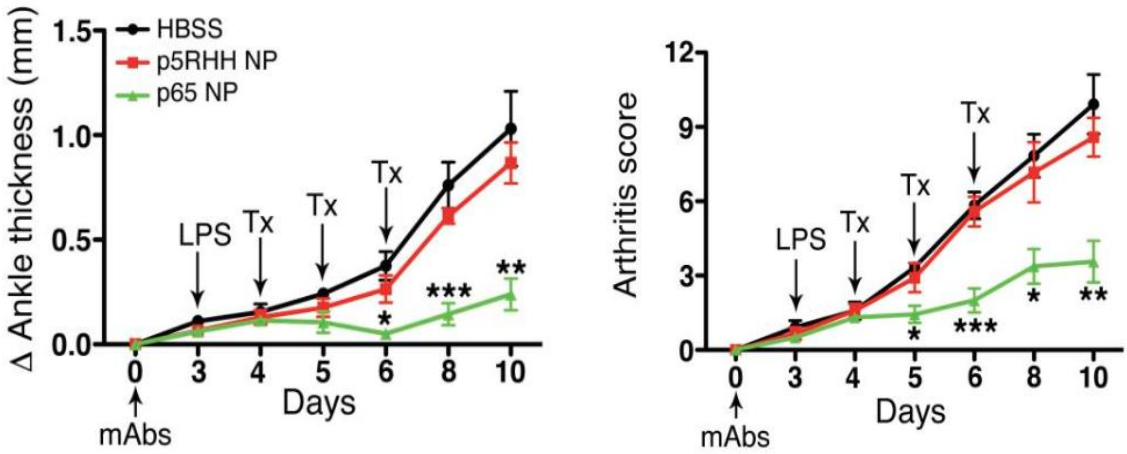

Exhibit 8: OligoPhore p65 Stabilizes Ankle Swelling and Reduces Arthritis Score. Source: Zhou et al., 2014

AM-411 uniquely targets p65 synthesis in inflamed tissues, lowering inflammation without affecting the NF-κB pathway elsewhere. This specific action potentially enhances efficacy and lowers the risk of treatment resistance compared to traditional therapies

AM-411 represents an innovative approach to treating rheumatoid arthritis (RA) by specifically targeting the NF-κB signaling pathway, which plays a pivotal role in immune and inflammatory responses. Utilizing Altamira's OligoPhore™ technology, AM-411 takes siRNA directly to inflamed tissues, enabling precise intervention in the disease's inflammatory processes. This technology facilitates the delivery of RNA payloads with remarkable efficiency, targeting substantial endosomal release within cells. At the core of AM-411's mechanism is an optimized siRNA targeting p65, a key component of the NF-κB pathway. P65's modulation is crucial in managing rheumatoid arthritis inflammation, making it a significant target for therapeutic intervention. However, NF-κB's widespread involvement in various cellular functions presents a challenge, necessitating a strategy that allows for selective, tissue-specific effects. Traditional treatments using small molecules or biologics often fall short in this regard. AM-411, however, distinguishes itself by selectively reducing p65 synthesis in inflamed tissues, thus lowering local inflammation without disrupting the NF-κB pathway's activity in non-targeted areas. This targeted approach not only ensures greater efficacy but also reduces the likelihood of treatment resistance, a common pitfall of conventional therapies.

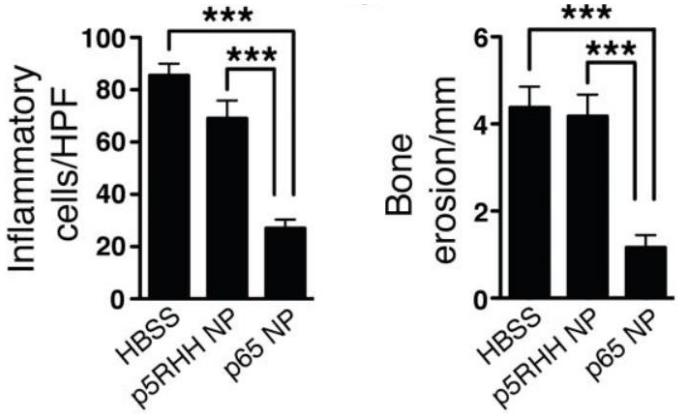

Exhibit 9: Inflammatory Infiltrates per High-power Field (HPF) (left) and Bone Erosion (right). Source: Zhou et al

In vivo studies, particularly a key trial using a mouse arthritis model, showed AM-411's OligoPhore nanoparticles with siRNA targeting NF-κB (p65) significantly reduced early arthritis symptoms

The potential efficacy of AM-411 has been convincingly demonstrated through in vivo studies, including a pivotal trial employing a collagen antibody-induced arthritis model in mice. In this study, OligoPhore nanoparticles equipped with siRNA targeting NF-κB (p65) significantly curtailed early inflammatory arthritis symptoms. The treatment markedly decreased the expression of inflammatory cytokines and the influx of immune cells into the joints, thereby safeguarding against bone erosion and preserving cartilage integrity. Notably, OligoPhore-p65-siRNA's action was localized, with no impact on p65 expression in organs outside the treatment target. Moreover, the therapy did not trigger any humoral response even after multiple injections, underscoring its safety and potential for long-term use. In line with its development timeline, Altamira expects to file an Investigational New Drug (IND) application for AM-411 by 2025. Showcasing its AM-411 program, the company is open to further partnerships for its RNA delivery platform and leveraging collaborative efforts to advance its innovative therapeutic approaches.

RNA Therapeutics Market and Competitive Overview

The RNA therapeutics market, valued at $4.9 billion in 2021, is projected to hit $25.1 billion by 2030, while the siRNA market alone is expected to exceed $67 billion by 2036, growing at an annual rate of around 18.5%.

The field of RNA therapeutics represents a significant advancement in medicine, offering new approaches to treat a range of diseases by targeting pathways previously deemed untreatable. Traditional small molecule drugs, which target the active sites of proteins to alter their function, are limited by the small percentage (~1.5%) of the human genome that encodes proteins and the druggability of these proteins (Damase et al., 2021; Hopkins and Groom, 2002). In response, recombinant protein technology has grown within the pharmaceutical market, though it faces challenges related to the size and stability of the proteins. RNA therapeutics include four main types: aptamers, antisense oligonucleotides (ASOs), RNA interference (RNAi), and messenger RNA (mRNA). Each type employs different mechanisms, such as binding to specific target molecules or promoting the degradation of mRNA, to achieve therapeutic effects. However, delivering RNA therapeutics into cells has been challenging due to RNA's instability and poor cellular uptake, prompting the development of delivery methods like nanocarriers and bioconjugates. Despite progress in liver-targeted delivery, extending these therapies to other tissues remains complex. The FDA's approval of the first systemically administered ASO and siRNA therapeutics between 2016 and 2018 marked a turning point, with more RNA-based treatments entering clinical development. The recent success of mRNA vaccines against COVID-19 has highlighted the advantages of RNA therapeutics, including rapid design and manufacturing scalability.

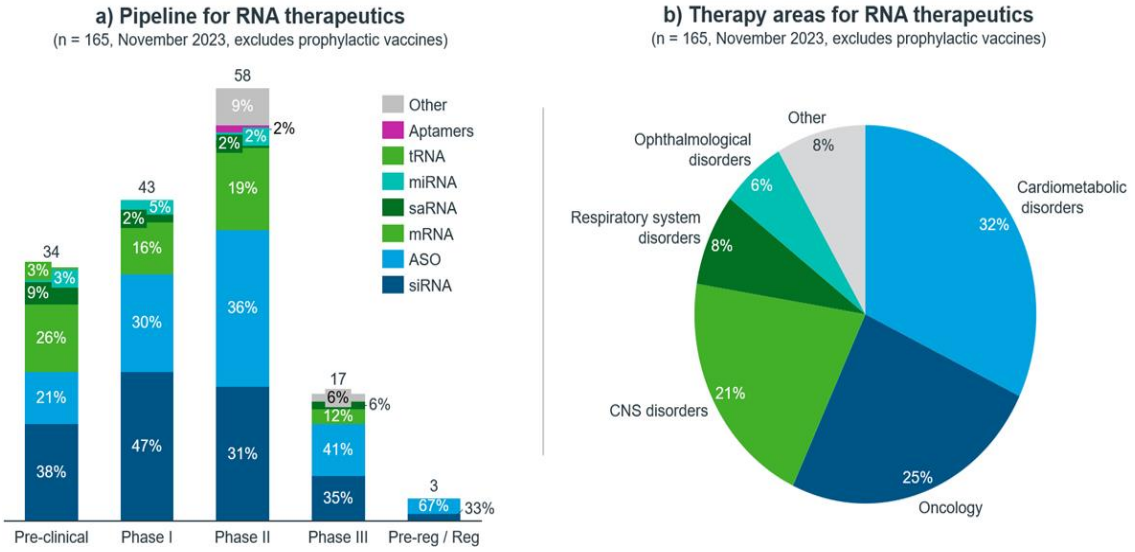

Exhibit 10: RNA Therapeutics Landscape. Source: IQVIA

Allied Market Research reports that the global RNA therapeutics market reached $4.9 billion in 2021, expected to grow to $25.1 billion[4] by 2030. Furthermore, Research Nester projects the market for small interfering RNA (siRNA) alone to surpass $67 billion[5] by 2036, with a compound annual growth rate of approximately 18.5% during the forecast period from 2024 to 2036, indicating the sector's significant growth from $13 billion in 2023. This growth reflects the potential of RNA therapeutics to address a variety of conditions, including chronic diseases like cancer and diabetes, as well as rare genetic disorders.

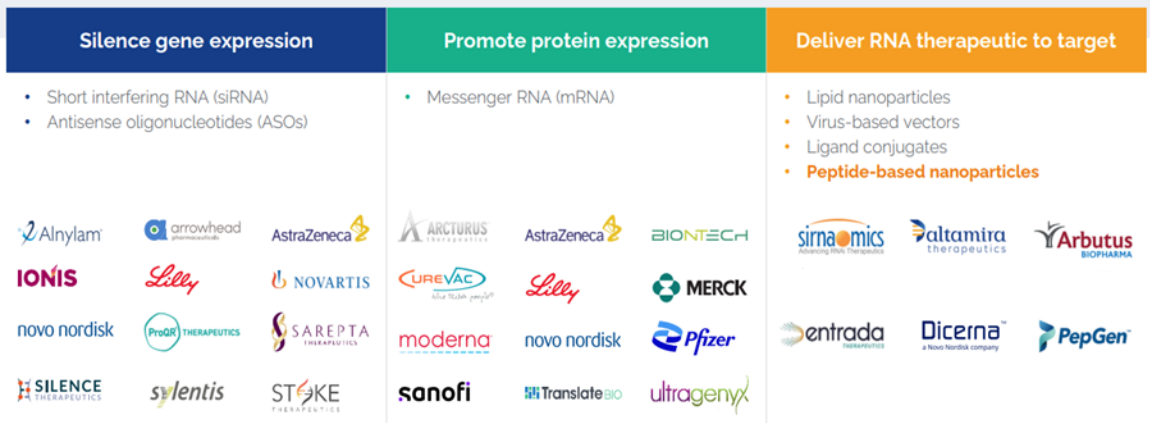

Exhibit 11: Select Companies Active in RNA Therapeutics and Delivery. Source: Company Presentation

Altamira Therapeutics operates in the competitive landscape of RNA therapeutics, contending with various competitors across its product range. The competition spans biotechnology and pharmaceutical companies, medical device manufacturers, academic entities, government agencies, and research institutions. Several companies are developing technologies for delivering RNA payloads to both hepatic and extrahepatic cells, including Acuitas Therapeutics Inc., Dicerna

[4] Allied Market Research, RNA based therapeutics market size, share: Report, 2030, Allied Market Research. Available at: https://www.alliedmarketresearch.com/rna-based-therapeutics-market
[5] Small interfering RNA (Sirna) market size & share, by type - global supply & demand analysis, growth forecasts, statistics report 2024-2036, Research Nester. Available at: https://www.researchnester.com/reports/small-interfering-rna-market/5297

Pharmaceuticals, Inc., and Genevant Sciences Corp., among others. Despite the crowded field, Altamira believes its OligoPhore™ / SemaPhore™ platform has distinct advantages such as systemic administration, extrahepatic tissue targeting, efficient cellular uptake, and high endosomal release levels. Regarding KRAS-driven cancers, companies like Amgen and Mirati Therapeutics have received FDA-accelerated approval for KRAS G12C inhibitors sotorasib and adagrasib. Other companies, including Novartis, Genentech, Eli Lilly, and Boehringer Ingelheim, are developing inhibitors targeting the G12C mutation. Merck and Moderna are working on mRNA-based vaccines for KRAS neoantigens, and Revolution Medicines has several small molecule inhibitors targeting various KRAS mutations. Additionally, RNAi approaches like NBF-006 by Nitto Denko and siG12D LODER by Silenseed Ltd. are in development.

With its focus on targeted RNA delivery and precision medicine, Altamira is potentially well-placed to meet unmet medical needs and offer substantial benefits over current treatments

The rheumatoid arthritis (RA) market is highly competitive, with major pharmaceutical companies marketing biologics targeting TNF-α, such as adalimumab (Abbvie) and infliximab (Johnson & Johnson), among others. The introduction of biosimilars, highly similar biologics with no clinically meaningful differences from approved biologics, has increased competition. Additionally, companies are marketing small molecule JAK inhibitors like upadacitinib (AbbVie) and tofacitinib (Pfizer), alongside older drugs like glucocorticoids, NSAIDs, and DMARDs, including methotrexate and hydroxychloroquine. However, they all come with their share of significant side effects.

In conclusion, Altamira faces or may face competition from various quarters for its products and candidates. Its ability to compete effectively will likely depend on distinguishing its offerings through advantages in efficacy, safety, convenience, and other key factors. However, given the novel approach of Altamira to treating diseases with a focus on targeted RNA delivery and precision medicine, the company is potentially well-positioned to address unmet medical needs and offer significant therapeutic benefits that current treatments do not provide. Furthermore, Altamira's issued patents and pending applications for its platform technology are slated to expire in 2034, with the possibility of extension through the Hatch-Waxman Act. Specifically, the patent applications for AM-401 and AM-411 could extend coverage until 2043 and 2044, respectively, if granted. The company remains open to partnerships to enhance the development and reach of its RNA delivery platform and therapies.

Active M&A Landscape in RNA Therapeutics

The RNA therapeutics sector is witnessing an increasingly vibrant mergers and acquisitions (M&A) landscape, reflecting the high value and potential that the industry and investors place on innovative RNA technologies and therapies. This surge in M&A activity emphasizes the strategic importance of RNA-based treatments in addressing a wide range of diseases, from genetic disorders to cancers, and highlights the confidence in these therapies' future market impact.

Acquiring Company	Target Company	Deal Size	Year	Remarks
Novo Nordisk	Dicerna	$3.3b	2021	Discover and develop RNAi therapies using Dicerna's proprietary GalXC™ RNAi platform technology
Sanofi	Translate Bio	$3.2b	2021	To advance the deployment of mRNA technology across vaccines and therapeutics development
Novartis	DTx Pharma	Up to $1b	2023	Focus on siRNA therapies for neuroscience indications
Amgen	Arrakis Therapeutics	$75 million upfront + several billion dollars milestones	2022	Research collaboration for RNA degrader therapeutics
Sanofi	Tidal Therapeutics	$160m + milestones (up to $310 million)	2021	Expand Sanofi's mRNA-based research capabilities in both immuno-oncology and inflammatory diseases
Strand Therapeutics	Beigene	Up to $277m	2021	Commercializing Strand's innovative, multi-functional mRNA treatments for solid tumors
Selecta Biosciences	Cartesian Therapeutics	$110m	2023	Merger focusing on RNA cell therapies for autoimmune diseases
Eli Lilly	MiNa Therapeutics	Up to $245m per target	2021	Collaboration on RNA activation therapeutics
Group led by Fall Line Capital	GreenLight Biosciences	$45.5m	2023	Develop mRNA vaccines and therapeutics
Cipla (EU) Limited	Ethris GmbH	EUR 15m	2022	Investment in mRNA therapies for the respiratory system

Exhibit 12: Select M&A Deals in the RNA Therapeutics and Delivery Space. Source: Public Deal Filings, Diamond Equity Research

The above exhibit showcases the active mergers and acquisitions landscape in the RNA therapeutics sector, featuring transactions from leading companies aimed at expanding capabilities and advancing treatments. From Novo Nordisk's acquisition of Dicerna to explore RNAi therapies to Sanofi's efforts to broaden its mRNA research, each deal highlights the industry's focus on integrating RNA technologies for therapeutic development. The range of partnerships and acquisitions, covering areas from neuroscience to immuno-oncology, reflects the sector's commitment to leveraging RNA-based innovations for addressing diverse medical challenges.

Legacy Programs: Targeting Non-Dilutive Funding Through Out-Licensing and Asset Sales, with Investors Gaining Exposure to Potential Future Royalty Income

Altamira Therapeutics is at a pivotal juncture, with a strategic emphasis on RNA delivery technology marking a significant evolution in its operational focus. However, the company's portfolio also includes a range of legacy programs that have been fundamental to its journey. These programs, encompassing Bentrio® (AM-301), AM-125, and Sonsuvi® (AM-111), span various therapeutic areas, including rhinology, neurotology, and allergology. As Altamira explores strategic options for these assets, including divestiture or partnerships, understanding the potential and challenges of each program is crucial for evaluating the company's overall valuation and future prospects.

The company's portfolio also features legacy programs like Bentrio® (AM-301), AM-125, and Sonsuvi® (AM-111), covering rhinology, neurotology, and allergology

Bentrio® (AM-301): Post-Sale Prospects and Partnership Dynamics

Altamira Therapeutics introduced Bentrio® (AM-301), an innovative nasal spray designed to protect against airborne viruses and allergens, through its subsidiary, Altamira Medica Ltd., in September 2020. Commercially available in Germany and several Asian countries under the CE mark, Bentrio® distinguishes itself as a drug-free, over-the-counter product. Its unique gel emulsion formulation establishes a protective barrier on the nasal mucosa, consisting of a mucoadhesive film to block airborne particles and a mechanism for trapping and removing these particles through mucociliary clearance. Additionally, Bentrio® aids in maintaining nasal mucosa humidity, enhancing its protective function against viruses and allergens, with bentonite clay as its key component.

Bentrio® is a drug-free, over-the-counter nasal gel that forms a protective barrier on the nasal mucosa, blocking and removing airborne particles

Exhibit 13: Bentrio Nasal Spray. Source: Bentrio.com

Clinical studies have demonstrated Bentrio®'s potential in alleviating symptoms of allergic rhinitis. An open-label randomized cross-over study in 2021 with 36 grass pollen allergic patients showcased Bentrio®'s rapid and durable protective effect compared to a hydroxypropylmethylcellulose-based comparator, earning superior efficacy ratings and exhibiting good tolerability. Further evidence of its effectiveness came from a 2022 clinical trial on house dust mite allergic rhinitis, where Bentrio® significantly reduced total nasal symptoms score versus no treatment, again proving its tolerability.

The pivotal NASAR trial on seasonal allergic rhinitis in Australia enrolled 100 patients, comparing self-administered Bentrio® to saline spray over two weeks under real-life conditions. Results indicated a statistically significant decrease in symptoms for the Bentrio® group, reaffirming its efficacy and tolerability. Moreover, in vitro studies have highlighted Bentrio®'s potential in reducing viral titers of pathogens like SARS-CoV-2 and H1N1 influenza virus, suggesting a protective effect against various virus strains, including COVID-19 variants. The COVAMID trial on acute COVID-19 did not show statistical significance in its primary efficacy endpoint but revealed a higher resolution of symptoms and reduction in infection rates among Bentrio® users, with minimal adverse events, pointing to its prophylactic utility.

Study	Study Design	Status
SARS-CoV-2 protection in human nasal epithelium model with original virus and Delta and Omicron variants	Daily treatment with Bentrio® for 4 days starting 10 minutes prior to inoculation	Completed
SARS-CoV-2 treatment in human nasal epithelium model with original virus, and Delta and Omicron variants	Daily treatment with Bentrio® for 4 days starting 24 or 30 hours after inoculation (for original virus) and 24 hours after inoculation (for Delta and Omicron)	Completed
Prevention / treatment of H1N1 infection in human nasal epithelium model	Daily treatment with Bentrio® for 4 days starting 10 min prior to inoculation (prevention) or 24 hours after inoculation (treatment)	Completed
Prevention / treatment of HRV infection in human nasal epithelium model	Daily treatment with Bentrio® for 4 days starting 10 min prior to inoculation (prevention) or 12 hours after inoculation (treatment)	Completed
Protection against symptoms of allergic rhinitis under grass pollen challenge	Exposure of patients with history of allergic rhinitis to grass pollen for four hours, treated prior with either Bentrio® or HPMC powder nasal spray (n=36)	Completed
Assessment of the nasal residence time	Single exposure of healthy volunteers with fluoresceine stained Bentrio® or control (n=12)	Completed
Protection against symptoms of allergic rhinitis under house dust mite (HDM) exposure	Exposure of patients with history of perennial allergic rhinitis to house dust mite allergen for 3 hours, treated prior with 1 spray or 2 sprays of Bentrio® per nostril or without treatment (n=36)	Completed
Treatment of SARS-CoV-2 - COVAMID trial	Treatment of patients with confirmed Covid-19 with Bentrio®, placebo or no treatment (n=174)	Completed
Protection against symptoms of seasonal allergic rhinitis (SAR) - NASAR trial	SAR patients to self-administer Bentrio® or saline control 3 times a day or, as needed, for 2 weeks (n=100)	Completed

Exhibit 14: Bentrio Overview of Key Studies. Source: Company Filings

Regulatory milestones for Bentrio® include EU conformity assessment completion in May 2021 and FDA 510(k) clearance in June 2022 as a Class II device for mild allergic symptoms alleviation. Despite its non-pharmaceutical composition, Bentrio®'s innovation lies in its mechanical barrier approach, positioning it as a versatile and effective solution in the consumer healthcare market for nasal protection against airborne threats. On November 17, 2023, Altamira Therapeutics Ltd. took a decisive step towards its strategic reorientation by divesting a 51% stake in Altamira Medica AG, the subsidiary responsible for the Bentrio® nasal spray, to a Swiss private equity investor. This move aligns with Altamira's commitment to prioritizing its core RNA delivery technology, emphasizing its ambition to focus on innovative therapeutic developments.

The transaction saw Altamira receiving CHF 2,040,000 (approximately $2.3 million) in cash consideration, while retaining a 49% share in Medica, ensuring a significant stake in the subsidiary's future. Additionally, Altamira secured rights to 25% of Medica's future licensing income, capturing approximately 62% of Bentrio's business upside potential. The sale also included the transfer of Auris Medical Pty Ltd in Melbourne, Australia, and a joint cash infusion of CHF 1,000,000 into Medica by its two shareholders, proportional to their shareholdings, post-transaction. This transaction signals an important first step in Altamira's strategic repositioning. The company anticipates that this move will spur major growth from 2024 onward, fueled by Bentrio®'s launch in new markets and strengthened distribution agreements. Medica is set to pursue market approval in Mainland China and South Korea through Nuance Pharma, with anticipated development and commercial milestones that could reach up to $22.5 million. Moreover, Pharma Nordic has already begun introducing Bentrio® in Scandinavia, starting in early 2024. Additionally, discussions are underway to expand its distribution into the U.S.—where Bentrio has been approved by the U.S. FDA as a medical device but is yet to be commercialized—and into other key global markets.

Inner Ear Therapeutics: Pioneering Advances in Otology

The company's otology portfolio includes AM-125 for vertigo, and Sonsuvi® (AM-111) for inner ear hearing loss treatment

Within the spectrum of its diverse therapeutic portfolio, Altamira Therapeutics, through its subsidiary Auris Medical, has dedicated significant efforts towards addressing the complexities of inner ear disorders. The company's otology portfolio consists of development of two pivotal clinical programs: AM-125, aimed at mitigating vertigo symptoms; and Sonsuvi® (AM-111), developed for the acute treatment of inner ear hearing loss. In addition, there are some early-stage preclinical programs on treatment of tinnitus.

Program	Indication	Clinical Phase
AM-125	Treatment of vertigo	Phase 2
Sonsuvi® (AM-111)	Treatment of acute inner ear hearing loss	Phase 3

Exhibit 15: Altamira Therapeutics' Inner Ear Therapeutic Programs Overview. Source: Company Filings

AM-125: Innovating Vertigo Treatment

Acute Vestibular Syndrome (AVS) represents a complex medical condition characterized by the sudden onset of severe dizziness, vertigo, or imbalance. Patients with AVS often exhibit specific clinical signs such as nystagmus—a rapid, involuntary movement of the eyes—or gait unsteadiness. Acute vestibular syndrome (AVS) may stem from a variety of origins, with benign paroxysmal positional vertigo (BPPV) recognized as the most common cause. BPPV results from the mechanical displacement of tiny crystals within the inner ear. Beyond this prevalent cause, AVS can also arise from infections, inflammation, or vascular issues, including but not limited to strokes. It's important to note that stroke-related AVS typically occurs in individuals presenting risk factors such as hypertension, elevated cholesterol levels, diabetes, and a familial history of stroke, among others.

The prevalence of AVS and its impact on the population is significant. A population-based study identified that 19.2%[6] of patients presenting with dizziness symptoms were suffering from AVS, translating to an incidence rate of 92 cases per 100,000 individuals. Furthermore, acute peripheral vestibulopathy (APV), often stemming from a presumed viral cause like vestibular neuritis or labyrinthitis, is a frequent diagnosis among the 2.6 million emergency department visits for dizziness or vertigo annually in the United States. The broader implications of vestibular dysfunction are substantial, with more than 35% of U.S. adults aged 40 and older experiencing some form of vestibular disorder during their lifetime. This equates to approximately 69 million individuals, many of whom may develop chronic vestibular disorders. Vertigo, a particularly debilitating form of vestibular dysfunction, affects about one in 15 adults[7] at some point in their lives, with an annual estimate of 200,000 seeking medical care for symptoms typically associated with inner ear dysfunction.

Given the prevalence and the considerable impact of dizziness and vertigo, particularly otologic dizziness, which affects 40%[8] of individuals experiencing dizziness, there exists a substantial unmet medical need for effective treatment options. Current management strategies often fail to address the underlying causes or provide long-term relief for patients, underscoring the urgency for innovative therapeutic approaches like AM-125 in addressing vertigo and AVS. Betahistine, widely recognized for treating vestibular disorders, acts both as a partial histamine H1-receptor agonist and more potently as a histamine H3-receptor antagonist. This mechanism promotes increased blood flow in the cochlear, vestibular, and cerebral areas, aids vestibular compensation, and suppresses neuronal activity in the vestibular nuclei. Unlike traditional vertigo medications, betahistine does not induce sedation, making it a preferred choice for managing vertigo and supporting vestibular rehabilitation. Despite its benefits, the primary challenge with betahistine lies in its low bioavailability due to rapid and extensive metabolism when administered orally. To overcome this issue, Altamira has developed AM-125, a solution for intranasal administration of betahistine, aimed at enhancing its bioavailability. This novel approach allows a greater quantity of the active substance to be absorbed through the nasal mucosa. Altamira's venture into the intranasal treatment of acute vestibular syndrome (AVS) with AM-125 began with the acquisition of assets from Otifex in February 2017, which included preclinical and clinical data, as well as intellectual property rights related to betahistine dihydrochloride in spray formulation.

Altamira's AM-125 enhances betahistine's low oral bioavailability by enabling intranasal administration, increasing absorption through the nasal mucosa

Initial clinical evaluations of intranasal betahistine demonstrated promising results. A Phase 1 trial conducted by Otifex involving 40 healthy volunteers reported significantly higher plasma concentrations of betahistine compared to oral administration, along with good tolerability. Building on this foundation, a second Phase 1 trial in 2018 with 72 healthy volunteers revealed superior bioavailability of intranasal betahistine across four doses relative to oral administration, achieving plasma exposure levels 5 to 29 times higher. This trial also confirmed the treatment's tolerability, even with thrice-daily administration for three days.

Intranasal betahistine showed higher bioavailability and tolerability than oral forms in Phase 1 trials, while Phase 2 trials demonstrated AM-125's potential effectiveness in treating acute vertigo, significantly improving balance and reducing nystagmus compared to placebo

The efficacy of AM-125 was further examined in the Phase 2 TRAVERS trial, which involved 124 patients suffering from acute vertigo post-tumor removal surgery across more than ten

[6] Yao, Q. et al. (2022) The spectrum of vestibular disorders presenting with Acute Continuous vertigo, Frontiers. Available at: https://www.frontiersin.org/journals/neuroscience/articles/10.3389/fnins.2022.933520/full
[7] Vertigo explained: What to do when the world is spinning (2023) Columbia University Irving Medical Center. Available at: https://www.cuimc.columbia.edu/news/vertigo-explained-what-do-when-world-spinning
[8] Timothy C. Hain, M., Epidemiology of dizziness. Available at: https://dizziness-and-balance.com/disorders/dizzy_epi.html

European study sites. This randomized, double-blind, placebo-controlled trial evaluated the efficacy of AM-125, administered at up to 20 mg three times daily for four weeks, alongside a standardized vestibular rehabilitation therapy regimen. The primary efficacy outcome, improvement in the Tandem Romberg test—a balance measure—demonstrated a statistically significant enhancement for patients treated with AM-125 compared to those receiving placebo. Additionally, a higher incidence of complete resolution in spontaneous eye movements (nystagmus) was observed among AM-125 patients, highlighting its potential in treating vestibular dysfunction.

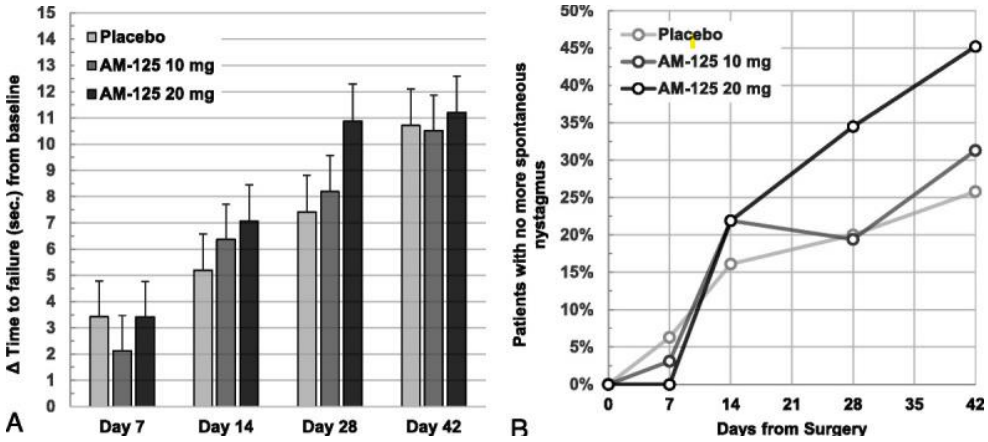

Exhibit 16: Improvement from baseline (day 3 post surgery) in time to failure in balance test for the intention-to-treat analysis set (n = 99). A, Tandem Romberg test; B, Percentage of patients with resolution of horizontal spontaneous nystagmus. Intention-to-treat analysis set (n = 99). Source: Van de Heyning, Paul et al.

The intellectual property portfolio for AM-125 is fortified by two key patents, expected to remain valid through February 2038, ensuring long-term protection and exclusivity in the market

In June 2023, the U.S. FDA granted IND clearance for AM-125 for treating posterior canal benign paroxysmal positional vertigo (BPPV), facilitating the continuation of clinical trials. Further, Altamira announced a significant milestone with the receipt of an "Intention to Grant" notice from the European Patent Office for its patent application titled "Intranasal Composition Comprising Betahistine" (designated as European Patent 3698791). This patent application, a continuation of the already granted European Patent 3474850, is poised to strengthen the intellectual property portfolio surrounding AM-125, with both patents expected to remain valid until February 2038. The company also has a patent issued in the U.S. with coverage up to 2038, with an option for further extension. This development, coupled with Altamira's comprehensive protection through global patents granted in approximately 50 countries, highlights the program's strong position in vestibular treatment innovation.

As Altamira Therapeutics refines its strategic focus towards RNA delivery technology, the company is actively exploring divestiture or partnership opportunities for the AM-125 program to facilitate its further development and commercialization. Having committed over $18 million to the program and successfully demonstrating its proof of concept in Phase 2 trials, Altamira is positioning AM-125 for a pivotal role in addressing the unmet needs within vestibular disorder treatment. The unique market position of AM-125, especially considering the lack of comparable products in the U.S., emphasizes its potential for significant impact. In this context, Altamira anticipates forming strategic partnerships by the first half of 2024, furthering the development and commercial success of AM-125.

AM-125's unique position, with no comparable U.S. products, highlights its significant market potential

Sonsuvi® (AM-111): Developing Treatment for Acute Inner Ear Hearing Loss

Acute sensorineural deafness represents a significant form of hearing loss, arising from damage to the inner ear structures, the auditory nerve that connects the ear to the brain, or the brain itself. This condition not only impacts the ability to hear but also can severely affect one's quality of life, making timely and effective treatment crucial. The prevalence of idiopathic sudden sensorineural hearing loss (SSNHL), a subset of acute hearing loss, highlights the unpredictable nature of this condition. With estimated incidences ranging from 11 to 77[9] cases per 100,000 people annually, the true scale of SSNHL remains uncertain due to factors such as spontaneous recovery and the propensity of affected individuals to forego medical consultation. SSNHL does not discriminate by age, though it most frequently occurs in individuals between 43 and 53 years old, affecting males and females in equal measure.

Sonsuvi® (AM-111), aimed at treating acute inner ear hearing loss, showed a favorable safety profile and improvements in hearing and tinnitus remission in Phase 2 trials, underlining its potential in multifaceted inner ear disorder treatment

Currently, there are no approved treatments specifically for SSNHL, underscoring a significant unmet medical need within this patient population. The absence of targeted therapies points to the necessity for innovative treatment options that can effectively address the underlying causes of acute sensorineural hearing loss and restore auditory function. Sonsuvi® (AM-111) represents Altamira Therapeutics' focused efforts in addressing acute inner ear hearing loss. In its journey through clinical evaluation, AM-111 demonstrated a favorable safety profile during a Phase 2 clinical trial. Notably, this trial highlighted clinically relevant improvements in hearing thresholds and speech discrimination for patients with severe to profound acute sensorineural hearing loss (ASNHL). Additionally, AM-111 was associated with a higher rate of complete tinnitus remission when compared to placebo, showcasing its potential in addressing multiple facets of inner ear disorders.

However, the subsequent HEALOS Phase 3 clinical trial, conducted to assess Sonsuvi®'s efficacy in treating acute inner ear hearing loss, did not meet its primary efficacy endpoint. Despite this setback, a detailed post-hoc analysis of the subpopulation with profound acute hearing loss (defined as a Pure Tone Average (PTA) ≥ 90 dB) unveiled a clinically meaningful and nominally significant improvement in patients treated with Sonsuvi® at a concentration of 0.4 mg/mL. This finding underscored the potential for targeted application of AM-111 in individuals experiencing the most severe forms of hearing loss.

Encouraged by these insights, Altamira proceeded to refine its clinical approach for AM-111. The company developed and submitted a new pivotal trial design focusing on patients with acute profound hearing loss to both the European Medicines Agency (EMA) and the U.S. Food and Drug Administration (FDA) for review. Both regulatory bodies endorsed the proposed trial design, efficacy and safety endpoints, and statistical methodology, affirming the solid foundation for further investigation of AM-111. Moving forward, Altamira Therapeutics will align its strategy with RNA delivery technology and, thus, intends to further advance the development of Sonsuvi® through partnerships.

[9] *UpToDate*. Available at: https://www.uptodate.com/contents/sudden-sensorineural-hearing-loss-in-adults-evaluation-and-management

Management Overview

Altamira Therapeutics is led by a team of seasoned professionals and supported by a board of directors with a solid track record in the biopharmaceutical field. This group combines deep expertise in drug development, financial management, and scientific research. Their experience includes roles in both established pharmaceutical companies and biotech startups, contributing valuable insights and leadership to guide Altamira's strategic direction and its commitment to developing new therapeutic solutions.

Thomas Meyer - Chief Executive Officer

Thomas Meyer, the Chief Executive Officer of Altamira Therapeutics, has been a pivotal figure in the company since its inception in April 2003, originally established as Auris Medical. Before founding Altamira, he held the position of CEO at Disetronic Group, a prominent Swiss company known for its precision infusion and injection systems. Meyer's career at Disetronic began in 1988, where he progressed through various roles, eventually becoming CEO in 2000 after serving as a Deputy CEO and a member of the Board of Directors. Meyer's background is enriched with strategic and financial advisory roles for several Swiss companies, enhancing their strategy, marketing, and corporate finance operations. Additionally, he has contributed his expertise as a board member and key investor in various small to medium-sized Swiss industrial firms. His academic credentials include a Ph.D. in business administration from the University of Fribourg, Switzerland.

Covadonga Pañeda - Chief Operating Officer

Dr. Covadonga Pañeda, the Chief Operating Officer at Altamira Therapeutics, brings over 15 years of experience in drug development to the team. Her career includes a significant tenure of 7 years as R&D Manager at Sylentis S.A., a clinical-stage RNAi biopharmaceutical company. Following this role, she served as Director of Development at Limm Therapeutics, a company focusing on neuroimmune biopharmaceuticals. Dr. Pañeda's strong academic background is highlighted by her Ph.D. in Biochemistry and Molecular Biology from the Faculty of Medicine at Universidad Autónoma in Madrid, Spain. Further enriching her expertise, she spent several years as a postdoctoral researcher at the Scripps Research Institute in La Jolla, California.

Marcel Gremaud - Chief Financial Officer

Marcel Gremaud, CPA, has served as the Chief Financial Officer of Altamira Therapeutics since November 2021, bringing with him a robust experience of over 30 years in financial control and accounting across international pharmaceutical companies and startups. In 2001, he established Gremaud GmbH, an audit and accounting firm specializing in assisting companies with financial consolidation and accounting, tailored to meet International Financial Reporting Standards (IFRS) or Swiss GAAP FER.

Samuel A. Wickline - Chief Scientific Adviser

Samuel A. Wickline, MD, serves as the Chief Scientific Adviser at Altamira Therapeutics, following the acquisition of Trasir Therapeutics, Inc., a company he founded, in 2021. This acquisition marked the inception of Altamira's venture into RNA therapeutics. Prior to his role at Altamira, Dr. Wickline was a key figure at the University of South Florida (USF), where he held several prestigious positions including Director of the USF Health Heart Institute, Associate Dean, Chair in Cardiovascular Medicine, and Professor across multiple disciplines such as Cardiovascular Sciences, Molecular Physiology and Pharmacology, and Medical Engineering. His extensive academic career also includes a tenure as Professor of Medicine, Physics, Biomedical Engineering, and Cell Biology and Physiology at Washington University in St. Louis.

Mats Blom - Director

Mats Blom has been a valuable member of the Board of Directors at Altamira Therapeutics since April 2017. He is the Chief Financial Officer at NorthSea Therapeutics B.V., and has previously held CFO roles at Modus Therapeutics A/B, Zealand Pharma A/B, and Swedish Orphan International. Blom's extensive experience extends to managerial positions at Active Biotech AB and Anoto Group AB, and consultancy roles at Gemini Consulting and Ernst & Young. Additionally, he serves on the boards of Egetis Therapeutics AB, Hansa Biopharma AB, and Pephexia Therapeutics ApS. His academic credentials include a BA from the University of Lund and an MBA from IESE University of Navarra.

Alain Munoz - Director

Alain Munoz, MD, has served on Altamira Therapeutics' Board of Directors since March 2018, with an earlier tenure from 2007 to 2015. His career in the pharmaceutical and biotechnology industries includes roles at the Fournier Group as Research and Development Director, and Senior Vice President, as well as positions at Sanofi Research. Munoz, qualified in cardiology and anesthesiology, has been part of the Scientific Committee of the French Drug Agency. He currently holds board positions at Zealand Pharma A/S and is the Chairman of Acticor Biotech SAS, contributing significantly to the strategic direction of these organizations.

Margrit Schwarz - Director

Margrit Schwarz joined the Board of Directors of Altamira Therapeutics in July 2021, bringing a rich history of executive leadership within the biotechnology and pharmaceutical sectors. Her past roles have included Chief Operating Officer at Draupnir Bio, Chief Business Officer at HepaRegeniX, and Chief Scientific Officer and Head of R&D at Genevant Sciences, where she focused on developing RNAi and mRNA drug candidates for liver and rare diseases. Schwarz's experience extends to senior positions at Roche, Boehringer Ingelheim, and Amgen, where she contributed to preclinical R&D and the successful launch of Repatha in 2015. Currently, she advises Immunethep and EvlaBio and works with Innosuisse and the European Innovation Council. Her academic background includes a Ph.D. in biochemistry from the University of Cologne and an MBA from Columbia University.

Valuation

Altamira Therapeutics presents a unique investment opportunity, combining the potential for near-term monetization of its late-stage assets with the long-term growth prospects in the high-growth RNA therapeutics field. The company's strategy to divest or partner its advanced assets in rhinology, neurotology, and allergology is particularly noteworthy, aiming to generate non-dilutive funding through upfront cash payments and milestone achievements. This approach minimizes shareholder dilution—a significant and unusual advantage in the biotech sector, given the industry's common reliance on equity financing for capital.

Altamira's current market capitalization does not fully reflect the substantial investments made in developing its late-stage assets or the inherent value of its innovative RNA delivery platforms, OligoPhore™ and SemaPhore™. This disparity underscores a potential undervaluation by the market, likely due to an underappreciation of the synergies between Altamira's diverse asset portfolio and its strategic positioning within the rapidly expanding RNA therapeutics market. In valuing Altamira Therapeutics, we've employed a blend of Discounted Cash Flow (DCF) and comparable company analysis as our foundational valuation methods. We've applied a discount rate, or Weighted Average Cost of Capital (WACC), set at 10.0% to estimate the present value of future cash flows. Utilizing this blended approach under the specified assumptions has led to a valuation of $8.21 per share. This valuation is contingent upon the company's successful execution of its strategic plans.

Drug	Prob. of Success	Royalty Rates	Commercialization Year
RNA Programs (AM-401/AM-411)	7.5%	8.0%	2027
Legacy Programs (AM-125/111/101)	50.0%	8.0%	2027/2026/2026

Calculated Equity Value ($ mm)	
Enterprise Value	$12.94
- Debt and Preferred Stock	$0.11
+ Cash	$2.70
Net Debt	$2.58
Equity Value	**$15.53**

Approaches (in $ mm)	Value (USD)	Weight	Wtd. Value
DCF	$15.53	80.0%	$12.42
GPCM	$29.89	20.0%	$5.98
GTM			
Wtd. Avg. Equity Value ($ mm)			**$18.40**
No of Diluted Shares Outstanding			**2.24**
Intrinsic Value Per Share			**$8.21**

Company Name	Ticker	Price	Currency	Country	Mkt Cap.*	P/B*	P/R&D*
Andros Pharmaceuticals Co., Ltd	6917	23.75	TWD	Taiwan	26.03	n.a.	n.a.
Avidity Biosciences, Inc.	RNA	24.61	USD	USA	1950.00	3.90	10.21
Bio-Path Holdings, Inc.	BPTH	5.20	USD	USA	3.53	8.00	0.30
Dyne Therapeutics, Inc.	DYN	26.84	USD	USA	2,200.00	24.10	10.44
Entrada Therapeutics, Inc.	TRDA	12.62	USD	USA	423.71	1.70	4.85
Medesis Pharma S.A.	ALMDP	1.44	EUR	FR	6.98	n.a.	n.a.
Neurogene Inc.	NGNE	34.70	USD	USA	444.85	n.a.	10.30
NeuBase Therapeutics, Inc.	NBSE	0.91	USD	USA	3.39	0.40	0.26
TransCode Therapeutics	RNAZ	0.68	USD	USA	4.44	1.00	0.38
PepGen Inc.	PEPG	14.09	USD	USA	455.87	4.20	6.69
Arbutus Biopharma Coporation	ABUS	2.60	USD	USA	467.58	4.40	6.34
Sarepta Therapeutics	SRPT	127.54	USD	USA	11,970.32	13.90	13.64
Alnylam Phamraceuticals	ALNY	146.51	USD	USA	18,452.32	n.a.	18.45
Median						**4.20**	**6.69**
Mean						**6.84**	**7.44**

Exhibit 17: Valuation Snapshot. Source: Diamond Equity Research
(Mkt Cap in millions, Valuation multiples are based on LTM figures) *

Appendix

Year-end 31 Dec. (in CHF)	2022A	2023A	2024E	2025E	2026E
INCOME STATEMENT					
Revenue	-	-	-	-	-
Gross Profit	-	-	-	-	-
Operating Expenses	(18,023,246)	(6,171,688)	(7,846,208)	(10,287,422)	(12,755,616)
Other Operating Income	9,327	255,589	-	-	-
EBIT	(18,013,919)	(5,916,099)	(7,846,208)	(10,287,422)	(12,755,616)
Finance Income/Expense	(645,643)	(1,314,382)	6,064	563,554	1,065,220
Profit Before Tax (PBT)	(18,659,562)	(7,270,038)	(7,840,143)	(9,723,867)	(7,617,550)
Profit After Tax (PAT)	(26,528,411)	(3,869,173)	(7,840,143)	(9,723,867)	(7,617,550)
Basic Shares Outstanding	45,536	491,258	2,014,157	3,524,776	5,287,164
EPS	(582.58)	(7.88)	(3.89)	(2.76)	(1.44)
BALANCE SHEET					
Cash and cash equivalents	15,395	617,409	4,200,409	5,472,578	2,219,138
Other current assets	1,753,598	605,745	605,745	605,745	1,683,930
Total current assets	1,768,993	1,223,154	4,806,154	6,078,323	3,903,068
Non-current assets	4,533,772	6,471,105	6,471,105	6,471,105	6,471,105
Total Assets	**6,302,765**	**7,694,259**	**11,277,259**	**12,549,428**	**10,374,173**
Short-term borrowing	5,987,653	99,659	99,659	99,659	99,659
Other current liabilities	6,892,018	789,255	1,883,090	2,983,352	3,779,690
Total current liabilities	12,879,671	888,914	1,982,749	3,083,011	3,879,349
Long-term borrowing	343,629	-	-	-	-
Other non-current liabilities	1,394,276	346,628	346,628	346,628	346,628
Total liabilities	14,617,576	1,235,542	2,329,377	3,429,639	4,225,977
Total Equity	(8,314,811)	6,458,717	8,947,882	9,119,789	1,148,195
Total Liabilities & Equity	**6,302,765**	**7,694,259**	**11,277,259**	**12,549,428**	**5,374,173**

Exhibit 18: Financial Statement Snapshot. Source: Diamond Equity Research

Risks Profile

- **Financial Viability and Funding Risk -** Altamira Therapeutics has experienced ongoing losses and negative cash flows since inception, largely due to significant research and development expenses. The company anticipates continued losses as it progresses with key projects like AM-401 and AM-411. The future of these projects hinges on securing additional funding, which may not be readily available or may come with unfavorable terms. This financial strain could necessitate scaling back or halting development programs, adversely affecting the company's operations.

- **Strategic Repositioning and Divestiture Risk -** Altamira Therapeutics is in the process of strategically repositioning towards RNA delivery technology while planning to divest or partner its neurotology, rhinology, and allergology businesses. However, there is no guarantee that these efforts will be successful. The company faces the risk of being unable to secure favorable terms or complete these transactions within a desirable timeframe, which could impact its strategic focus and financial health.

- **Commercialization and Competitive Landscape Risk -** Altamira Therapeutics is venturing into the competitive consumer healthcare market with Bentrio®, currently marketed in Europe but not yet in the U.S., despite FDA clearance. The challenge of competing against larger, well-established companies raises uncertainties about the successful commercialization of Bentrio®. To mitigate this risk, the company seeks to partner Bentrio with larger players in the space rather than directly competing with established players. Further, the company's future largely hinges on the development and potential out-licensing of its preclinical candidates, OligoPhore™, SemaPhore™, AM-401, and AM-411. Failure to advance these programs or secure partnerships could significantly affect Altamira's financial condition and operational outcomes.

- **Dependency on Third-Party Services and Production -** The company depends on third-party entities to conduct its nonclinical and clinical trials, along with other critical tasks. Failure of these third parties to fulfill their contractual obligations, meet deadlines, or adhere to regulatory standards may obstruct the regulatory approval and commercialization of the company's product candidates. Additionally, the company relies on third-party suppliers for the production of Bentrio® and its product candidates. This reliance could potentially hinder the progress of research and development programs and the advancement of product candidates, if these third-party relationships were to be compromised.

- **Novel Therapies and Clinical Acceptance Risk -** Altamira Therapeutics is developing therapies in areas with limited clinical experience, and in some instances, employing novel endpoints. This approach increases the risk of unfavorable outcomes in clinical trials. Moreover, even if trials, such as those for AM-125, yield positive results, there's no guarantee these findings will meet the expectations or requirements of regulators and healthcare professionals. This uncertainty could impact the approval and adoption of the company's therapies in the intended markets.

These risk factors are not comprehensive. For a full list of risk factors, please read Altamira Therapeutics' latest prospectus and/or annual filings

Disclosures

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